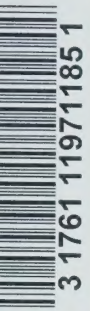
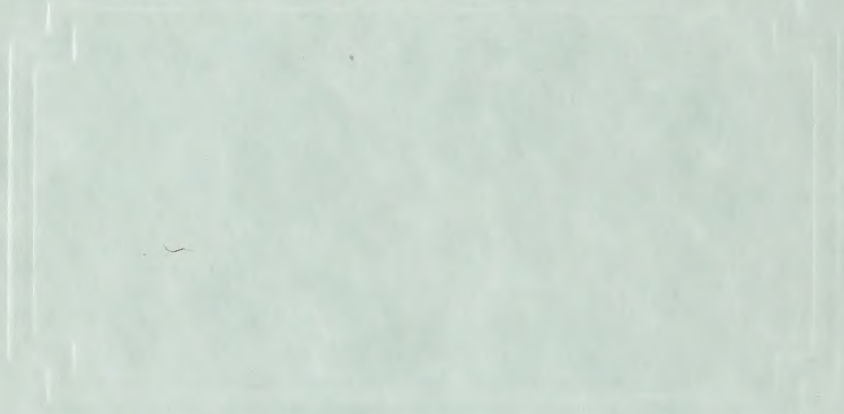


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THE HAGERSVILLE TIRE FIRE

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April 1990



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THE HAGERSVILLE TIRE FIRE

INTRODUCTION

Early in 1990, a fire at a privately-owned storage depot for used tires (containing some 14 million tires on 4.6 acres) near Hagersville, Ontario, caused a significant discharge of toxic chemicals into the air, soil and, possibly, groundwater. The fire, apparently started by an arsonist in the early morning of 12 February 1990, burned for 17 days before it was extinguished by local volunteer firefighters, firefighters from the Ministry of Natural Resources, and three Canadian CL-215 water bombers. People living first within a four-kilometre radius of the site, and later within a one-kilometre radius, were ordered evacuated because of the toxic smoke emissions. Approximately 600 people left their homes.

This paper will address first the probable impacts of the Hagersville fire on the environment and on the health of persons living near the depot. Several tire fires during the 1980s, chiefly in the United States, provide information which is useful for this analysis. The second part of the paper describes federal and provincial safety and emergency legislation for dealing with emergencies of this sort. The third part of the paper will address the question of financial compensation for the damages caused by the fire and responsibility for the clean-up costs.

BACKGROUND TO ANALYSIS

A. Tire Fires in the United States

In the United States, fires in tire depots are quite frequent and most often of criminal origin. For example, Ohio and Oregon States were victims of 70 and 22 tire fires, respectively, in six

years.⁽¹⁾ Though a tire fire in as large a depot as the one in Hagersville is unusual, information relating to major fires in the United States merits consideration in assessing the potential environmental and health impacts of the Hagersville fire.

Three major tire fires in the United States from 1983 to 1987 are considered for the purpose of the present report. These fires occurred in Virginia, Wisconsin and Colorado (see Table 1). Analyses of these fires, mainly by the Environmental Protection Agency in the U.S., give much information on the environmental and health hazards for the neighbouring communities. The fact that these fires burned in rural areas makes them even more pertinent to a comparison with Hagersville.

TABLE 1

Three Major Tire Fires in the United States⁽²⁾

Place	Date	Number of burned tires	Duration
Winchester (Virginia)	November 83	5 million	8 months
Somerset (Wisconsin)	October 86	6 million	2 weeks
Hudson (Colorado)	June 87	1-2 million	4 days

These figures should be analyzed in the context of the differing characteristics of each site, especially the area and management of the tire depot. It is somewhat surprising to see the differences in duration of the three fires. In Winchester (Virginia), tires burned for eight months, mainly because of the high density of the piles; five million tires were piled up over an area of only two hectares (5 acres). Therefore, authorities decided to let the fire burn, so that the tires were consumed, causing more than 3.5 million litres (1 million gallons) of oil to be produced. It was estimated that the fire produced almost 375 litres (100 gallons) of oil per minute on occasion.⁽³⁾ This phenomenon

(1) M. Turgeon, Risques environnementaux associés au dépôt de pneus de Saint-Amable, Québec, Ministère de l'Environnement, Direction de la récupération et du recyclage, 20 October 1988, p. 3.

(2) Ibid.

(3) Ibid., p. 7 and 12.

is due to the low amount of oxygen present as a result of the high density of tires.

In Somerset (Wisconsin), six million of an estimated eight to nine million tires stockpiled on a site of approximately 10 hectares (25 acres) were consumed by a fire that lasted two weeks. This fire probably makes the most interesting comparison with that near Hagersville, since it too occurred in an agricultural area dominated by dairy farming and cereal production. Experts consider that this fire burned for a shorter period than the fire in Winchester because the density of the pile was considerably less.⁽⁴⁾

In Hudson (Colorado) the "Tire Mountain" depot contained an estimated 6 million tires over an area of eight hectares (20 acres). An estimated 1 to 2 million tires burned for four days. In the absence of a good water supply to spray the fire, authorities decided to cover the fire with dirt. This strategy was facilitated by the fact that the tire depot consisted of numerous separated piles so it was possible to confine the fire where it started. In four days the fire was extinguished, although it continued to smoulder for weeks.⁽⁵⁾

These fires have been analyzed in numerous ways as regards their effect on the environment and health of the nearby populations. They represent an interesting source of comparison with the recent events in Hagersville, even though it is too soon to have a complete record of the short term effects of that fire.

B. Composition of Tires

Before considering the health and environmental effects of the Hagersville tire fire, we should look at the general composition of tires. In order to give tires long durability and good road adherence,

(4) Jeffrey A. Stofferahn and Verneta Simon, "Emergency Response to a Large Tire Fire: Reducing Impacts to Public Health and the Environment," Presented at Haztech International Conference, August 26-28, 1987, St. Louis, MO, p. 483-496.

(5) Dave Bierwiler and Lea Ekman, "Fire at Tire Mountain," Fire Command, October 1987, p. 18-19 and 48-49.

the tire industry uses a number of materials, most of which are very complex synthetic compounds. A typical car tire has eight different components, as is shown in Table 2.

TABLE 2
Typical Composition of a Car Tire⁽⁶⁾

Component	Percentage (%)
Synthetic SBR (Styrene-Butadiene Rubber)	26.0
Polybutadiene	8.7
Natural Rubber or Isopropene	6.3
Butyle or Chlorobutyle	3.3
Carbon Black	24.7
Oil	13.0
Fibres (including wire)	13.3
Chemical Products (Zinc Oxide, Sulphur, Stearic Acid)	4.7

Moreover, it is estimated that manufacturing a new tire requires approximately 26 litres (seven US gallons) of primary oil. Also, rubber has a calorific potential of 15,000 BTU for each pound, compared to 13,000 BTU for coal.⁽⁷⁾ These data give an idea of the high combustibility of tires and the tremendous amount of oil that can flow into the environment when a tire fire is slowly burning in the absence of enough oxygen. Some newspapers reported that, under certain conditions, the Hagersville fire could have produced more oil than the Exxon Valdez spill in Alaska.

HEALTH AND ENVIRONMENTAL IMPACTS OF TIRE FIRES

The effects on the health or environment of a major tire fire should be considered on two different levels. First, there are the effects of exposure to the smoke plume. Such exposure in the short

(6) Translated from Turgeon (1988).

(7) Turgeon (1988), p. 5.

term can affect fire fighters, the surrounding population and animal life. In the longer term, smoke particles transported by the wind will settle in the environment, where they can cause harm to the health of people and or animals through ingestion of vegetation or garden vegetables or fruits.

Second are the effects of the oil flow that results from tire combustion and of the water flow used to spray the flames. The more immediate impact would be on the environment but human beings could be affected in the long run if there was any contamination of ground water and soil.

These two types of health and environmental effects will be examined with regard to recent tire fires in the United States. This overview must not be interpreted as being directly applicable to the situation in Hagersville, since each site has its own characteristics. It is also too soon to make any real comparisons, since thorough tests and analysis still have to be completed in and around the Tyre King Recycling depot at Hagersville.

A. Effects of the Smoke Plume

Like any fire, tire fires will produce emissions such as carbon monoxide, sulphur dioxide, and nitrogen. Some experts even say that any combustion process will release PAHs (Polyaromatic Hydrocarbons), dioxins, and furans, chemicals known to cause cancer, although emissions would be less in tire fires than, for example, in PCB fires. Other chemicals resulting from tire particulate composition have been monitored in air analysis near tire fires in the United States. These chemicals are mainly zinc, lead, and other heavy metal oxides, carbon black and diverse aromatic compounds. The principal toxic substances that can be produced in a fire tire are shown, in Table 3, together with their potential health effects. The high toxicity of these chemicals is clear, although it is important to take into account the level of emissions in the air.

There is no doubt that tire combustion produces irritating gases, such as sulphur dioxide, which can affect the eyes and throat and cause headaches, breathing problems and vomiting. Such was the case in Waterbury (Connecticut), where the local health department received many

complaints from people exposed to smoke from a major tire fire in 1981. It has been shown that these immediate effects of smoke can be avoided by having people wear masks if they must stay near the site and by rapidly evacuating the rest of the neighbouring population.

Results of air sampling taken during the three major tire fires mentioned in Table 1 show that, in most cases, the contaminant concentrations did not go over threshold values. In these three cases, "the data do not suggest that severe, acute health threats on a parameter-specific basis (i.e., disregarding synergisms) were present at any of the three incidents."⁽⁸⁾ For example, levels of toxic contaminants like benzene, toluene, xylene and benzo(a)pyrene (see description in Table 3) stayed far below the standards. In the Somerset fire, the level of total suspended particles and total coal tar pitch volatiles at times did exceed the standards. Since these components are transported by air and are not biocumulated, it is recommended that the public avoid their effects by washing exposed items and food. Before samples of soils and forage were analyzed, "it was felt that the large amount of dispersion of plume contaminants would not yield any significant exposures to agricultural areas."⁽⁹⁾

Even though there were no significant short term effects on the health of people exposed to these tire fires, it remains important to evaluate and monitor long term potential risks to human health, particularly from such contaminants as benzene and PAHs. The same precautions should apply to cattle, poultry, forage and crops.

B. Effects of Oil and Contaminated Water

As reported in newspapers, the Hagersville tire fire may have produced around 600,000 litres of oil and 2 million litres of contaminated water. The latter represents a real hazard for the environment and for health if it spills out of the tire depot or if it leaches through soil to the groundwater table. In this situation, ditches, creeks and wells could be contaminated by toxic pollutants like benzene,

(8) Stofferahn and Simon (1987), p. 490.

(9) Ibid., p. 492.

TABLE 3

HAGERSVILLE CHEMICAL COCKTAIL

Principal toxic by-products of the tire fire

Chemical	Description	Health effects
Benzene	An aromatic hydrocarbon found in almost all petroleum products, household detergents and wood finishes. Present as vapor or in small amounts in water. The automobile is the biggest source of benzene in large cities.	Known to cause blood changes, including leukemia, after years of occupational exposure.
Toluene	An aromatic hydrocarbon found in industrial solvents, paints and glues. Present as vapor or in trace amounts in water. Breaks down in water and soil or when exposed to sunlight.	A central nervous system depressant, that may cause fatigue and memory loss after exposure to 100 parts per million in air. Causes liver damage and blood changes after prolonged occupational exposure to 200 to 500 ppm.
Xylene	A group of aromatic hydrocarbon found in industrial resins, solvents, paints and rubber cements. Present as vapor or in trace amounts in water.	Central nervous system depressant, can cause airway irritation.
Phenols	A group of organic chemicals found in industrial resins, solvents and some petroleum products. May be present as vapor or in trace amounts in water.	Vapors irritate skin, eyes and nose; a large absorption through the skin or mouth associated with kidney, liver and nervous system damage.
Polyaromatic Hydrocarbons (PAHs)	A group of about 40 different semi-volatile organic chemicals, including benzo-a-pyrene and naphthalene, usually found together.	Associated with several cancers in people after prolonged occupational exposure.
Benzo-A-Pyrene	A worrisome PAH connected with the Hagersville fire.	Causes cancer in humans after prolonged exposure.
Naphthalene	A polyaromatic hydrocarbon found in insecticides and coal tar, and a major ingredient in moth repellents.	Vapors may cause nausea, vomiting and disorientation and irritate skin and eyes. Prolonged exposure may cause cataract formation in humans.

PAHs, dioxin, and heavy metals like zinc and lead. A preliminary analysis has revealed the presence of such chemicals as benzene and toluene in water runoff from the fire.

Fortunately, oil and water were rapidly confined in retention basins. Most of the oil was recovered for recycling and contaminated water is now being treated and decontaminated. It also appears that the site has a good layer of clay, which can reduce percolation through the ground to the watertable. Preliminary tests of wells have revealed traces of benzene and toluene in only 7 wells out of 100. It is suspected that these contaminants did not come from the fire but more likely came from gasoline spills.

Studies of previous fires show that surface waters have been mostly contaminated by ammonia, iron, phenol and zinc. Such was the case in Akron (Ohio) where the zinc level appeared to stay high in a stream nearby a tire deposit for more than a year after a fire. This high zinc level could be the result of oil melting out of the tires or of ash spreading in the environment after the fire.

There is no doubt that many chemicals produced by a tire fire are, in certain concentrations, toxic for human health. It seems very important to monitor carefully and analyze all environmental components (surface and ground water, soils, crops and forage) and evaluate short and long term effects on people exposed to the tire fire and those who live in the area. These people should be kept well informed of the studies undertaken and their results.

SAFETY AND EMERGENCY LEGISLATION

A. Federal Legislation

After consultation with the Ontario government, the federal government could have declared the Hagersville fire to be a public welfare emergency and taken special temporary measures to deal with the tire fire, pursuant to Part I of the Emergencies Act, S.C. 1988, c. 29. A "public welfare emergency" is defined as including an emergency caused by an

accident or pollution resulting in danger to life or property, social disruption or a breakdown in the flow of essential goods, services or resources, so serious as to be a national emergency (s. 5). Such a declaration could be made only if the Lieutenant Governor in Council of Ontario indicated that the emergency exceeded the province's capacity or authority to deal with it (s. 14(2)).

While a declaration of a public welfare emergency is in effect, under s. 8(1), the Governor in Council can make orders and regulations concerning:

- (a) the regulation or prohibition of travel where necessary for the protection of the health or safety of individuals;
- (b) the evacuation of persons and the removal of personal property;
- (c) the requisition, use or disposition of personal property;
- (d) furnishing essential services and providing reasonable compensation for such services;
- (e) distributing and making available essential goods, services and resources;
- (f) making emergency payments;
- (g) establishing hospitals and emergency shelters;
- (h) assessing, repairing, and restoring damages to works or undertakings;
- (i) assessing and alleviating environmental damage; and
- (j) imposing fines or terms of imprisonment for contravention of any order or regulation.

The federal government thus has extensive powers to deal with an emergency situation like the Hagersville tire fire, although it was not called upon to do so in this instance. The facts that the public welfare emergency head covers incidents of pollution and the Governor in Council is empowered to deal with cleaning up environmental damage would suggest that the existing legislation is adequate for dealing with this type of disaster.

Part V of the Act protects the Crown from any liability in respect of any act or omission done under the Act. Instead, the Minister

responsible is required to award reasonable compensation to any person who suffers loss, injury or damage as a result of anything done under the Act and the Crown is subrogated to the rights of that person (s. 48). Any person not satisfied with the Minister's decision regarding compensation can appeal the decision to an Assessor (s. 51). An Assessor is appointed from among the judges of the Federal Court of Canada by the Governor in Council (s. 50). The Act is otherwise silent regarding the recovery of compensation from those responsible for the emergency.

B. Provincial Legislation

Pursuant to the Fire Marshals Act, R.S.O. 1980, c. 166, fire marshals are given a broad authority to order removal of combustible or explosive materials or anything that may constitute a fire menace where premises are unsafe or dangerous, or where combustible or explosive materials are located.

The Emergency Plans Act, 1983, S.O. 1983, c. 30 was implemented to deal with the Hagersville tire fire since this Act applies to a situation "caused by the forces of nature, an accident, an intentional act or otherwise that constitutes a danger of major proportions to life or property" (s. 1(c)). The head of a municipal council or the Premier may declare that an emergency exists and may act and make such orders as he considers necessary to implement an emergency plan and to protect property and the health, safety, and welfare of the inhabitants of the emergency area (s. 4). The Act also gives a right of action to the municipality or the Crown against any person who caused the emergency for the recovery of money expended to implement an emergency plan, or in connection with an emergency (s. 12).

COMPENSATION⁽¹⁰⁾

A. Ad Hoc Compensation

On 23 February 1990, the Ontario government announced a limited compensation plan for residents affected by the Hagersville fire. The plan covers out-of-pocket expenses such as hotel rooms, food and laundry costs, and transportation. Those evacuees who stayed with friends or relatives will receive a fixed per diem rate (\$20 for each adult and \$10 for each child). Residents are also eligible for up to \$500 to cover the cost of cleaning up their homes.

Questions remain as to how residents will be compensated for damage to health or property, or for economic losses. There is also some controversy about responsibility for the clean-up of the site (disposal of the tires, etc.) and the attendant cost. At the present time, the Legal and Financial Sub-Committee of the Inter-Ministerial Joint Response Team set up by the Ontario Government is responsible for making a recommendation to the provincial government on a long-term compensation package. The money is expected to come from the Disaster Relief Program of the Ministry of Municipal Affairs.

B. Common Law Remedies

The main method of seeking compensation for bodily injury or property damage is to sue in common law for damages. "Damages" is the term used for an award of money granted by the court to compensate a person who has suffered a loss or injury which is caused by the act complained of. The damages must be a foreseeable consequence of the defendant's

(10) This part is drawn from the following sources

David Estrin and John Swaigen, Environment on Trial (revised edition) Canadian Environmental Law Research Foundation, Toronto, 1978.

Robert T. Evanson and Alastair R. Lucas, Canadian Environmental Law, Butterworths, Toronto, 1976, Volume 1, pp. 353-390.

Allen M. Linden, Canadian Tort Law, Butterworths, Toronto, 1977.

John Z. Swaigen, Compensation of Pollution Victims in Canada, Economic Council of Canada, 1981.

wrongful act. The major causes of action in an environmental context are: nuisance, riparian rights, trespass, negligence and strict liability. Each of these will be discussed separately below.

1. Nuisance

Nuisance is primarily concerned with injury to property. The two kinds of nuisance recognized at common law are private and public.

a. Private Nuisance

A person whose property is physically damaged or who suffers unreasonable interference with the use and enjoyment of his property as an indirect result of environmentally damaging actions by another person, may bring an action in private nuisance against the person responsible. A private nuisance may cause two different types of injury to an individual's rights, either actual damage to health or to property (or the consequent economic loss) or personal inconvenience and annoyance.

If an activity results in actual damage to property or health, it will be found to be a nuisance even if the defendant's use of his land was reasonable and valuable to the community. Where the damages claimed are only for personal inconvenience and annoyance, the interference must be substantial to be actionable and the plaintiff must prove that the defendant's use of his land was unnatural and unreasonable in the circumstances.

b. Public Nuisance

When one cause affects many people, the common law denies any one person the right to sue, unless he can show damage to his property, or show that he has suffered damage much different from or much greater than that of his neighbours. Otherwise, the action may only be brought by, or with the consent of, the provincial Attorney General.

The Hagersville tire fire seems to have caused damage with both public and private aspects. The fact that the smoke and odour disturbed everyone in the vicinity, however, does not prevent an owner from bringing an action for damage done to his property, even if this is not substantially different from the damage done to other people's property.

On the other hand, a person renting a house or apartment in the neighbourhood, without any property interest, cannot sue for relief from smells which disturb the neighbourhood unless the discomfort is substantially greater than or different from that of the neighbours. The public nuisance concept thus restricts the opportunities for private citizens to take legal action.⁽¹¹⁾

2. Riparian Rights

Ownership of land bordering a river, lake or stream gives rise to certain rights in the water, including access, use, and a right to continued flow of the water in its natural quantity and quality. In a riparian action, unlike a nuisance action, the plaintiff need not prove actual damage; it is sufficient to show that his legal riparian right is affected. This means that any added pollutant which alters the natural qualities of the water and results in a riparian owner's not receiving the natural waters of the stream will be actionable.

There are no riparian rights in percolating water, although it is well-established that a person who pollutes an aquifer will be responsible to affected ground water users on the basis of private nuisance.

3. Trespass

The common law of trespass refers to wrongful physical acts performed, intentionally and directly, on a person's property. It is not necessary that actual damage be proven. Air pollutants landing on one's property, which are emitted from an identifiable source, would probably give rise to an action in trespass. Trespass is often alleged in the alternative in a private nuisance action although courts tend to favour the more familiar action of nuisance.

(11) The Ontario Law Reform Commission recently recommended that the public nuisance standing rule be abolished so that the Attorney-General would no longer have the right to block access to the courts. (Ontario Law Reform Commission, Report on Standing, Ministry of the Attorney-General, Toronto, 1989).

4. Negligence

A cause of action for negligence arises if the following elements are present:

- (1) the defendant's conduct must be negligent, that is, in breach of the standard of care set by the law;
- (2) the claimant must suffer some damage;
- (3) the damage suffered must be caused by the negligent conduct of the defendant;
- (4) there must be a duty recognized by the law to avoid this damage;
- (5) the conduct of the defendant must be a proximate cause of the loss, and
- (6) the conduct of the plaintiff should not be such as to bar recovery, i.e. on the grounds he was contributorily negligent or that he voluntarily assumed the risk.

In the case of the Hagersville tire fire, there may be a cause of action in negligence against both the owner of the tires and the Ontario Ministry of the Environment. There is some evidence to suggest that the fire was "a disaster waiting to happen." The Ministry of the Environment was aware that the depot was hazardous and had ordered the owner to implement certain safety precautions, including dividing the millions of tires into smaller piles and creating laneways between them, building a fence to deter vandals, and installing on-site water ponds. The owner, however, had appealed this order to the Environmental Appeal Board, and subsequently to Divisional Court. Although the owner certainly had the right to appeal the order under the Ontario Environmental Protection Act, perhaps the Ministry should have either pursued the safety issues more vigorously or handled the matter differently. A detailed knowledge of both the tire depot and the contents and progress of the Ministry's file would be required to make an allegation of negligence.

5. Strict Liability

A nineteenth century English decision, Rylands v. Fletcher, put forward a theory of strict liability for abnormally dangerous activities. Stockpiling millions of tires may be considered to be a dangerous

activity. A person who brings onto his land for his own use anything likely to do harm if it escapes, does so at his peril. He may be held fully responsible for all damages resulting from its escape even if he has taken the utmost care to prevent it from escaping. Unlike the case for negligence or nuisance, it is not necessary to prove any carelessness or unreasonableness. It is not absolute liability, however, and there are a number of defences available to the plaintiff. Those which would likely be raised here include an intervening cause; the naturalness or reasonableness of the use of the property; and statutory authority.

Since the Hagersville fire was started by an arsonist, however, the defendant would likely seek to establish that the escape in question was caused by the deliberate act of a third person. Against this, though, the courts have held that where conduct of a third person brings about the loss, strict liability will be imposed where that act is foreseeable or if it could have been prevented by the defendant.

Where an activity is clearly authorized by legislation, no strict liability is imposed unless the defendant is found to have been "negligent." The courts will imply a legislative intention to authorize certain harm only where the damage is a necessary or inevitable result of the authorized act. To allow a defence of legislative authority, the courts have narrowed the meaning of "negligence" so that the defendant must convince the court that the activity was carried on in the only way possible.

C. Statutory Remedies

Part IX of the Ontario Environmental Protection Act imposes duties and liability when there is a spill of pollutant into the natural environment. It is unclear whether Part IX applies to the Hagersville tire fire, because of the restrictive definition of "spill" set out in its interpretation section (s. 79).

"spill," when used with reference to a pollutant, means
a discharge,

- (i) into the natural environment;

- (ii) from or out of a structure, vehicle or other container; and
- (iii) that is abnormal in quality or quantity in light of all the circumstances of discharge.

Both the Ministry and the Environmental Compensation Corporation have expressed some doubt as to whether the fire comes within this definition because it was not "from or out of a structure, vehicle or other container." In the absence of a court ruling on the matter, the applicability of Part IX is debatable.

Part IX imposes a duty on both the owner and the person having control of the spilled pollutant to notify the Ministry of the Environment and the municipality immediately and to do everything practicable to "prevent, eliminate and ameliorate" the adverse effect of the spill and to restore the natural environment. The Minister may also order either that "everything practicable" be done or specific action be taken regarding that task, and with respect to disposal of the pollutant and polluted materials, within a specified period. In addition, the Minister may give directions to the employees and agents of the Ministry of the Environment to do "everything practicable" or to carry out specific orders. The municipality, regional municipality and certain designated persons are also empowered to act (s. 88).

Compensation is payable to a third party for loss or damage (including personal injury, loss of life, loss of use or enjoyment of property and pecuniary loss, including loss of income) and for reasonable cost and expense incurred in carrying out an order or direction under Part IX (s. 87(2)). Such loss or damage must be incurred either as a direct result of the spill or in the exercise or, failure to exercise, a duty imposed by the Act.

The owner and the person having control of the pollutant are liable to pay compensation even in the absence of fault or negligence (s. 87(6)). Defences available to the owner or controller are set out in s. 87(3) of the Act as follows:

An owner of a pollutant or a person having control of a pollutant is not liable under subsection (2) if he

establishes that he took all reasonable steps to prevent the spill of the pollutant or if he establishes that the spill of the pollutant was wholly caused by,

- (a) an act of war, civil war, insurrection, an act of terrorism or an act of hostility by the government of a foreign country;
- (b) a natural phenomenon of an exceptional, inevitable and irresistible character; or
- (c) an act or omission with intent to cause harm by a person other than a person for whose wrongful act or omission the owner of the pollutant or the person having control of the pollutant is by law responsible,

or any combination thereof.

The owner of the Hagersville tire dump may be able to establish that he comes within the last of these exceptions. To do so, he would have to prove that the spill was caused solely by the arsonist and was not the result of any act or omission on his part. Even if he is successful, however, this would not relieve him of liability for clean-up costs and restoring the area. Absolute liability is imposed on the owner for the direct costs associated with the spill (s. 87(4)(b)).

Outside Part IX of the Environmental Protection Act, the Ministry has other authority to order the clean-up of the tire fire site. Section 41 provides that the Director may order the person having charge of the land to remove waste and restore the site to a condition satisfactory to the Director. Should the owner fail to comply with an order, the Director may have the necessary work done and charge the owner with the cost. In addition, section 143 gives a general authority to the Minister to remedy any default by a person ordered or required to do any matter or thing by ordering it be done at the expense of that person and recovering the cost, plus legal costs, in a court of competent jurisdiction.

D. Environment Compensation Corporation

Under the Environmental Protection Act, compensation from the Crown in right of Ontario is available to persons (other than an owner or controller) carrying out an order or direction under Part IX for all

reasonable costs and expenses incurred (s. 89(1)). This right to compensation may be enforced by court action. Once payment is made, the Crown is subrogated to the rights of those persons for the amount paid plus the costs of recovery.

Under s. 91, compensation is also available from the Environmental Compensation Corporation (established under s. 99 of the Act) in the following circumstances to a maximum amount prescribed and calculated pursuant to the regulations:

Upon application, the corporation shall authorize payment in respect of a spill of a pollutant to

- (a) any person who has incurred loss or damage as a direct result of,
 - (i) the spill of a pollutant that causes or is likely to cause an adverse effect,
 - (ii) the exercise of any authority under subsection 88(1) or the carrying out of or attempting to carry out a duty imposed or an order or direction made under this Part, or
 - (iii) neglect or default in carrying out a duty imposed or an order or direction made under this Part;
- (b) any person who has incurred reasonable cost and expense in respect of carrying out or attempting to carry out an order or direction under this Part; and
- (c) the owner of the pollutant and the person having control of the pollutant who are liable to pay compensation under this Part, if such person, owner of the pollutant or person having control of the pollutant is a member of a class prescribed by the regulations and meets the conditions prescribed by the regulations.

Thus, not only the victims of spills, but also those owners or persons in control who are liable to pay compensation under the Act, can recover damages from the Corporation. The end result is that, while a person liable at common law for damages cannot usually recover anything from the Corporation, a person not liable at common law should be able to

recover from the Corporation the total amount of liability imposed by the Act. The rationale behind this is to encourage clean-up, restoration of the environment, and compensation by having the province pay for the additional liability imposed by the Act.

The provisions for compensation are limited, however. A "specified deductible" is established by the regulations so that an owner or controller who is an individual, partnership, corporation or municipality must absorb liabilities to an amount of \$1 million, plus, in the case of a corporation, 10% of the value of the corporation's assets. If an owner or controller has insurance in excess of the deductible, he may recover any amount above the "applicable insurance." Insurance to cover the \$1 million deductible is available through an insurance pool. The upper limit of compensation payable for a single spill is \$5 million, unless the Lieutenant Governor in Council authorizes further compensation.

With respect to those who have suffered loss as a result of a spill of a pollutant which they neither owned nor controlled, the Corporation will pay compensation (when other compensation is not available) to a maximum of \$10,000 plus 10% of the remaining amount. Payments for property damage and clean-up costs are subject to a \$500 deductible plus a deduction for depreciation.

Where payment is made by the Corporation, the Corporation is subrogated to the rights of the person paid to the extent of the payment, plus any costs.

